

Mineral Industry Surveys

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SULFUR IN NOVEMBER 2005

During the month, production of recovered elemental sulfur was 698,000 metric tons, according to the U.S. Geological Survey. November production was 13% higher than that of October 2005 and 12% lower than that of November 2004. Shipments were 11% higher than those of October 2005. Producers' ending stocks for November 2005 were 173,000 tons.

Sulfur production increased as petroleum refineries began to recover from the effects of Hurricanes Katrina and Rita. Two refineries in Louisiana remained closed, but they were expected to restart early in 2006. The others damaged by the storms in Louisiana and Texas had restarted and had achieved or were approaching full production.

Import and export data for November 2005 were not available at the time of publication and will be published in the Sulfur in December 2005 Mineral Industry Surveys along with apparent consumption. Imports of recovered sulfur for October 2005 were estimated to be 212,000 tons; exports were 104,000 tons. Imports of sulfuric acid for October 2005 were 253,000 tons; exports were 32,000 tons.

Significant adjustments have been made to the sulfur import data. Reports from the U.S. Census Bureau appear to underreport sulfur imports, especially material from Canada. The revised figures are based on Census information and data from personal communications with industry experts.

TABLE 1
SALIENT SULFUR STATISTICS¹

(Thousand metric tons)

Period	Production			Shipments, all sources	Ending stocks ³
	Petroleum ²	Natural gas	Total		
2004:					
January-December	7,390	1,990	9,380	9,410	XX
January-November	6,720	1,820	8,550	8,570	XX
November	622	167	789	771	200
December	664	167	831	846	185
2005:					
January	571	169	740	740	179
February	547	156	703	695	188
March	585	169	754	755	184
April	598	157	755	756	168
May	619 ^r	159 ^r	778	766	178
June	617 ^r	158	774 ^r	771 ^r	178
July	622 ^r	153 ^r	775	774	176
August	647 ^r	163 ^r	811	813	175
September ^f	486	141	628	632	165
October ^f	481	136	617	617	158
November ^p	557	141	698	687	173
Total	6,330	1,700	8,030	8,010	XX

^pPreliminary. ^rRevised. XX Not applicable.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes a small quantity from coking operations.

³Subject to inventory adjustments.

TABLE 2
U.S. IMPORTS OF SULFUR¹

(Thousand metric tons and thousand dollars)

Period	Canada		Mexico		Total, all countries ²	
	Quantity ^e	Value ³	Quantity	Value ³	Quantity ^e	Value ³
2004:						
January-December	2,010	31,300	545	28,200	2,850	76,800
January-October	1,700	26,000	459	24,800	2,440	65,600
October	160	1,740	51	2,170	220	4,370
November	150	2,650	31	1,240	186	5,700
December	160	2,660	55	2,200	226	5,400
2005:						
January	145	2,070	31	1,070	239	4,730
February	130	2,130	50	1,930	230	6,080
March	145	2,320	40	1,640	185	4,050
April	165	2,530	47	1,840	249	5,830
May	170	1,890	40	1,570	251	5,140
June	165	2,460	40	1,780	235	5,670
July	170	2,650	40	1,490	218	5,610
August	170	2,820	20	808	221	5,040
September	160	3,020	39	1,600	241	6,360
October	160	3,570	44	1,900	212	7,770
Total	1,580	25,500	391	15,600	2,280	56,300

^eEstimated.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include other countries not listed.

³Declared customs valuation.

Sources: U.S. Census Bureau data as adjusted by U.S. Geological Survey and PentaSul North America Sulphur Service.

TABLE 3
U.S. IMPORTS OF SULFURIC ACID¹

(Thousand metric tons and thousand dollars)

Period	Canada			Europe			Total, all countries ²		
	Quantity	Sulfur content	Value ³	Quantity	Sulfur content	Value ³	Quantity	Sulfur content	Value ³
2004:									
January-December	1,920	628	72,500	206	67	6,670	2,390	780	86,300
January-October	1,600	521	54,300	165	54	4,570	1,920	625	63,100
October	176	58	6,450	19	6	946	215	70	7,480
November	160	52	5,930	11	4	289	218	71	7,500
December	140	46	4,970	30	10	655	251	82	7,510
2005:									
January	173	57	5,990	30	10	840	248	81	9,490
February	174	57	6,190	(4)	(4)	18	213	70	7,820
March	183	60	7,080	32	10	759	254	83	8,590
April	191	63	7,770	10	3	629	250	82	9,660
May	158	52	6,370	--	--	--	192	63	7,080
June	144	47	5,360	--	--	--	189	62	6,380
July	168	55	6,840	(4)	(4)	5	213	70	7,790
August	156	51	6,490	(4)	(4)	83	196	64	9,150
September	169	55	6,890	11	4	198	241	79	8,260
October	178	58	7,880	6	2	149	253	83	11,600
Total	1,690	555	66,800	89	30	2,680	2,250	737	85,900

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include other countries not listed.

³Declared customs valuation.

⁴Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 4
U.S. EXPORTS OF SULFUR AND SULFURIC ACID¹

(Thousand metric tons and thousand dollars)

Period	Sulfur		Sulfuric acid		
	Quantity	Value ²	Quantity	Sulfur content	Value ²
2004:					
January-December	949	63,300	204	67	21,300
January-October	787	47,100	171	56	18,600
October	127	7,250	23	8	1,850
November	31	2,280	20	7	1,590
December	130	8,740	13	4	1,120
2005:					
January	22	1,740	13	4	1,590
February	72	5,040	28	9	2,230
March	41	6,270	31	10	2,270
April	94	6,010	51	17	3,280
May	16	1,850	26	8	2,560
June	56	5,920	38	12	3,630
July	64	4,520	24	8	1,920
August	71	5,330	25	8	2,600
September	42	3,470	26	8	2,810
October	104	7,070	32	10	3,020
Total	478	40,100	262	85	22,900

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Declared f.a.s. (free alongside ship) valuation.

Source: U.S. Census Bureau.

TABLE 5
U.S. CONSUMPTION OF SULFUR¹

(Thousand metric tons)

Period	Domestic sources ²	Imports ^c	Consumption
2004:			
January-December	8,470	2,850	11,300
January-October	6,810	2,440	9,450
October	638	220	858
November	740	186	926
December	716	226	942
2005:			
January	718	239	957
February	623	230	853
March	715	185	900
April	662	249	911
May	750	251	1,000
June	715 ^r	235	950 ^r
July	710	218	928
August	742	221	963
September	590	241	831
October	513	212	725
Total	6,740	2,280	9,020

^cEstimated. ^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Calculated as shipments minus exports.

TABLE 6
RECOVERED SULFUR PRODUCED AND SHIPPED IN THE UNITED STATES,
BY PAD (PETROLEUM ADMINISTRATION FOR DEFENSE) DISTRICT¹

(Thousand metric tons)

District and source	November 2005 ^p		October 2005		January - November 2005 ²		January - November 2004 ²	
	Production	Shipments	Production	Shipments	Production	Shipments	Production	Shipments
PAD 1:								
Petroleum and coke	20	21	20 ^r	20 ^r	232	232	215	219
Natural gas	1	2	2	2	17	17	19	19
Total	21	21	22 ^r	22 ^r	249	249	234	237 ^r
PAD 2:								
Petroleum and coke	76	77	76 ^r	76 ^r	929	933	887 ^r	887 ^r
Natural gas	3	3	3 ^r	3 ^r	33	33	39	39
Total	79	79	79	79	962	967	926 ^r	926 ^r
PAD 3: ³								
Petroleum and coke	354	339	283	283	3,940	3,940	4,350 ^r	4,360 ^r
Natural gas	39	38	41	42 ^r	453	455	468 ^r	467 ^r
Total	393	378	324	325 ^r	4,400	4,400	4,820 ^r	4,830 ^r
PAD 4 and 5: ⁴								
Petroleum and coke	107	108	102	97	1,230	1,190	1,270 ^r	1,280 ^r
Natural gas	98	100	91 ^r	95 ^r	1,200	1,210	1,300 ^r	1,300 ^r
California	87	88	85	80	977	939	963 ^r	960 ^r
Total	205	208	193 ^r	191 ^r	2,420	2,390	2,570 ^r	2,570 ^r
Grand total	698	687	617 ^r	617 ^r	8,030	8,010	8,450	8,480

^pPreliminary. ^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include revisions.

³Includes the U.S. Virgin Islands.

⁴Quantities produced and shipped in California included in petroleum and natural gas. California total shown for information purposes only.

TABLE 7
COMPARATIVE SULFUR AND SULFURIC ACID STATISTICS¹

(Million metric tons per year [annualized basis]
and dollars per metric ton for period shown)

	2005			2004
	November	October	Total	total
Production	8.49 ^P	7.26 ^r	8.78 ^r	9.38
Shipments	8.36 ^P	7.26 ^r	8.75 ^r	9.41
Exports of sulfur	NA	1.22	0.57	0.95
Imports of sulfur:				
Canada	NA	1.88 ^e	1.90 ^e	2.01
Mexico	NA	0.52	0.47	0.55
Total ²	NA	2.50 ^e	2.74 ^e	2.85 ^e
Export of H ₂ SO ₄	NA	0.38	0.31	0.20
Import of H ₂ SO ₄ :				
Canada	NA	2.10	2.03	1.92
Europe	NA	0.07	0.11	0.21
Total ²	NA	2.98	2.70	2.39
Consumption: ³				
Domestic sources	NA	6.04	8.09	8.35
Imports	NA	2.50 ^e	2.74 ^e	2.85 ^e
Total	NA	8.54	10.80	11.21
Sulfur export values ⁴	NA	\$68	\$84	\$67
Sulfur import values: ⁴				
Canada	NA	\$22	\$16	\$16
Mexico	NA	\$43	\$40	\$52
Average	NA	\$37	\$25	\$27
H ₂ SO ₄ export values ⁴	NA	\$94	\$87	\$105
H ₂ SO ₄ import values: ⁴				
Canada	NA	\$44	\$39	\$38
Europe	NA	\$25	\$30	\$32
Average	NA	\$46	\$38	\$36

^eEstimated. ^PPreliminary. ^rRevised. NA Not available.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes other countries not listed.

³Because November trade data were not available, November consumption was not determined.

⁴Average value per ton for most recent data available.